



Surry County Broadband Update & Status Report



Updated January 2019

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Near the very end of the construction part of the Broadband project, a number of constituents have called or stopped by the office to ask questions about construction status, and costs for service. Additional inquiries by constituents have been for data plans with unlimited bandwidth. The inquiries for specific subscriber information are concerning because they evidence that some do not have a clear understanding of the project's model. To help clarify the model and the proposed implementation plan a review of the 2009 Surry County Broadband Implementation Plan is provided. The plan was commissioned by the Surry County Board of Supervisors and funded by the County and the Virginia Department of Housing and Community Development. It provided a model and framework for implementation of the local Broadband program by outlining an approach to address the availability of reasonably priced internet services countywide. The 2009 plan recommended that the County pursue broadband services by connecting either a fiber based or microwave link to a lower cost provider with a presence in an adjacent county. This approach was and remains standard in rural areas with a broadband presence, like the southwest part of the State of Virginia. While this was our plan in 2009, time, relationships and opportunities changed our implementation plan favorably.

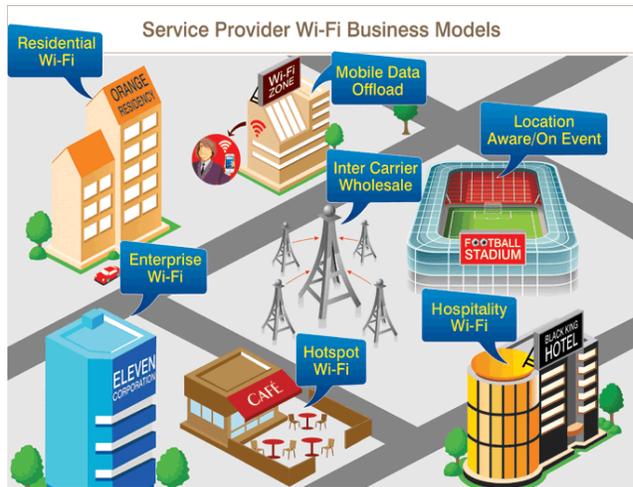
Surry County was able to barter, trade and partner with Mid Atlantic Broadband Communities, Incorporated, who had both a presence in the County, and significant fiber network throughout the Commonwealth of Virginia. We were able to co-locate our fiber hub with Mid-Atlantic Broadband Communities, Inc. thereby negating the need for the microwave link to connect to an internet service provider in an adjacent community. Our data can be transported across the Surry County owned network to the Mid-Atlantic Broadband Communities, Inc. network and to the World Wide Web. The network development costs, just under one million dollars, was undertaken to bring lower cost wholesale Internet services to the County and advance our public safety communication needs. All the infrastructure to facilitate the data transport now exist locally, a tremendous coup for the community, an improvement far and above our original vision and a direct result of our relationship with Mid-Atlantic Broadband Communities, Inc.

Fiber is very costly. That fact, combined with limited population densities, contribute to the reluctance of private fiber based or wireless providers absorbing the costs necessary to offer subscriber services in the County. The cost of fiber, coupled with budgetary realities, is the reason why we embarked upon a phased approach to the Broadband project. The first phase of the project was planned to reach the greatest concentration of business and municipal locations within the County. Through subsequent phases of the project, envisioned for funding through both local dollars and grant awards, additional end-users would be reached.

Because of the limited number of customers connected directly to fiber, the ability to develop an agreement with a wireless provider(s) is a critical part of the viability of the implementation plan. This is the crucial next step in the Broadband Project Implementation Plan. In the next few months, the County will publish a Request For

Interest (RFI) seeking wireless internet providers. We are hopeful that one or more respondents will come forward that can offer subscription internet services. The County could negotiate access to the fiber infrastructure and tower, and reduced data transport fees. In return for these concessions, we are hopeful that the County and the wireless provider(s) can contractually agree to lease rates below market in exchange for subscriber subsidies and revenue generation to cover the costs of operation and sustainability of the fiber network and electronics gear.

A frequent question is, what data speeds will be available on the network. The current FCC definition of broadband service transmission is a minimum speed of 200 Kbps. This speed is below what is typically offered over wireless (minimum 1 Mbps) and below the capabilities of fiber. The County network is capable of offering speeds of 1Gbps or greater. Surry County is not able to answer questions regarding subscriber costs and bandwidth restrictions. These decisions will be made as part of the business model developed by perspective wireless providers. We can influence these decisions in our lease negotiations and are hopeful that these discussions will be timely, productive and fruitful.



We will keep you abreast of these discussions as they progress. In the interim the project's specific milestones include the construction of a 350' communication tower, accessory equipment, and the deployment of 23,300 linear feet, approximately four miles of fiber optic cable, traversing and area commencing along Rolfe Highway/State Route 31, extending along Commerce Drive/Surry Industrial Park and continuing along Rolfe Highway/State Route 31 to the intersection of Rolfe Highway/State Route 31 and Colonial Trail East/State Route 10, thru the Town of Surry, and terminating in the vicinity of 697 Colonial Trail East, the Dollar General store. Additionally, end user terminations were installed for eleven community service facilities and four business entities.

In November 2013, Surry County's fiber network was lit and now offers circuits to its fiber. The network has greater reliability, increased bandwidth, and costs that are significantly lower than a T1(1.Mbps) line, the method two of our community's largest employers used before transferring service to the County network. The local network offers more bandwidth that is dedicated per subscriber, with greater reliability, for less cost. Surry County government operations, the Surry Branch of the Blackwater Regional Library, Windsor One and Edwards Ham are now all serviced by the network. The County's wireless network will be facilitated by the fiber based network that will truncate at the tower base. Wireless services are forthcoming and anticipated to be online and offering subscriptions to residential customers in 2016.

In Spring 2017 the Surry County Board of Supervisors directed Administrative Staff to commence negotiating with SCS Broadband, Inc., our Virginia Technology Initiative (VATI) grant partner, to develop a public private partnership to launch Broadband subscription services in Surry County. At its August 3rd meeting the Board approved a lease agreement permitting SCS Broadband to collocate on the Public Safety Communications Tower located off Commerce Drive.



SCS Broadband, Inc. committed to offering wireless ISP service to Surry County subscribers by November 30, 2017 using the new generation LTE technology which offers more efficient bandwidth, with minimal incidents of latency and buffering. LTE was designed for outdoor wireless, not indoor wireless local networks. As a more advanced technology designed specifically for outdoors, LTE signals can hold higher modulation levels in the face of obstruction. LTE also does a better job of aggregating the various reflections from leaves and still provide high levels of throughput. The proposed network design will permit our ISP partner to offer subscription services to business and residents ranging from 10 – 100 Mbps (and with the current generation of fiber network equipment, LTE, speeds of up to 1 Gbps). Upload speeds will be open to availability by location, with a minimum of 1Mbps and a maximum of 20Mbps. Services will be supported by an existing fiber backhaul to a contracted exchange network. The exchange will allow for the use of major high bandwidth applications within the network such as Netflix, Apple TV and Blackboard. Please see the SCS Broadband, Inc. link for information regarding subscription pricing and bandwidth: <http://acelanet.com/broadband/>

Surry County partnered with SCS Broadband to apply for a 2020 Virginia Technology Initiative grant to help expand high speed broadband internet service in the County. The proposal seeks funds for tower capital investments, and loading a second tower with SCS Wireless Internet Provider (WIP) equipment, to provide broadband subscription services up to 50Mbps proposed, to areas not currently covered in the County. As of December 2018 SCS Broadband has approximately 40 subscribers.

In addition the County has utilized incentive grant opportunities to expand broadband access in the community. The incentive grant opportunities with SCS Broadband and Prince George Electric Cooperative are as follows:

BROADBAND INCENTIVE GRANT INITIATIVES

SURRY COUNTY PROVIDED PERFORMANCE BASED INCENTIVES TO BOTH SCS BROADBAND AND PRINCE GEORGE ELECTRIC COOPERATIVE (PGEC) TO SUPPORT THEIR RESPECTIVE INFRASTRUCTURE EXPANSIONS IN THE AREA OF WIRELESS AND FIBER BASED SUBSCRIPTION SERVICE. SCS BROADBAND IS CONTRACTUALLY OBLIGATED TO A PRESCRIBED RATE STRUCTURE AND TIME FRAME FOR SERVICE DELIVERY IN THE SURRY MARKET AND PGEC IS OBLIGATED TO PROVIDE SUBSCRIPTION BASED FIBER SERVICE TO A MINIMUM OF 500 HOMES IN THE COUNTY WITHIN THEIR ELECTRIC SERVICE AREA. BOTH ARE IN LINE WITH THE BOARD OF SUPERVISORS AND ECONOMIC DEVELOPMENT AUTHORITY GOAL TO IMPROVE THE QUALITY OF LIFE FOR SURRY CITIZENS AND BUSINESS COMMUNITY EMPHASIZING BROADBAND IMPLEMENTATION AS A STRATEGIC PRIORITY IN ACHIEVING THIS GOAL.

The Economic Development Authority (EDA) through a capital grant from the Board of Supervisors entered into an agreement in August 2018 with [Prince George Electric Cooperative Enterprises for Fiber to the Home](#) broadband services. **THE BOARD OF SUPERVISORS APPROVED \$500,000 TO GRANT TO THE EDA**; the EDA then entered into the agreement with PGEC for this Project based on the critical need for broadband to boost economic development. The case for broadband in Surry for the purpose of economic and quality of life enhancement is based on the following per the agreement:

1. The extension of broadband provides enhanced educational opportunities (i.e. dual enrollment, homework accessibility, on-line school portals) and furthers workforce development (online job training and employment services) which supports economic development in Surry County.
2. The availability of secure, reliable, competitive and sustainable broadband infrastructure is essential to meet citizen's needs and is a powerful catalyst for job creation and drives economic modernization.
3. Small and medium sized business enterprises with greater high-speed internet use grow faster than those with less high-speed internet use.
4. Lack of broadband is a top complaint of Surry County residents and businesses

The EDA also provided an incentive grant to a private provider, [SCS Broadband](#) in the amount of \$65,524. Excerpt of the agreement between SCS Broadband and the EDA that speaks to the economic benefit of providing the grant is as follows:

WHEREAS, in order to further expand broadband service to residents and business throughout the County to areas where it is not economically feasible to extend fiber service, and thereby enhance economic development and educational opportunities for County businesses and citizens, the Authority desires to encourage private Internet providers to use the Tower; and

WHEREAS the stimulation of additional tax revenue to the County and economic activity in the County to be generated by the Capital Investment constitutes a valid public purpose for the expenditure of public funds and is the primary purpose of the Grant by the Authority.